SD6542S93805) and 09/586,572, entitled "Data Processing Device Test Apparatus and Method Therefor" (Docket No.184-P017US), which have been concurrently filed herewith.

Remarks

Favorable reconsideration of this application is requested in view of the following remarks. For the reasons set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The Office Action dated June 10, 2002 indicated that the declaration is defective for failure to indicate each inventor's citizenship; Figure 1 is objected to; the specification lacks serial numbers and filing dates for incorporated references; claim 1 stands rejected under §102(b) as being anticipated by *Cole, Jr. et al.* (U.S. Patent No. 5,430,305); claims 2, 3, 6-8, and 11-23 stand rejected under §103(a) as being unpatentable over *Cole et al.* in view of *Mathewes, Jr. et al.* (U.S. Pat. No. 4,875,209); claims 4, 5 and 9 stand rejected under §103(a) as being unpatentable over *Cole et al.* in view of *Mathewes, Jr et al.* and further in view of *Rhodes* (U.S. Patent No. 5,557,559); and claim 10 stands rejected under §103(a) as being unpatentable over *Cole, Jr. et al.* in view of *Mathewes, Jr. et al.* and further in view of *Birdsley* (U.S. Pat. No. 6,255,124).

With respect to the declaration, Applicant has enclosed a Supplemental Declaration as indicated above including the citizenship for each inventor. The Assignee of the instant U.S. patent application has confirmed that the citizenship of each named inventor is USA; thus, this has been added accordingly to the original Declaration.

With respect to the drawing objection, Applicant respectfully traverses. Figure 1 includes reference numerals, as listed in the Office Action at page 2, for each element in the figure. The reference numerals are clearly identified in the corresponding discussion in the specification of the instant application, for example, at page 9, lines 10-19. Applicant submits that the reference numerals are consistent with the requirements set forth in 37 C.F.R. §1.84(p) and no correction is required.

The specification has been amended to include the requested serial numbers of the incorporated references. Applicant has also included the filing date and issued patent number for the first listed reference.

Applicant respectfully traverses the §102 and §103 rejections. The first-named inventor (Mr. Cole) of the main reference ('305) is also an inventor of the subject matter of the instant application. Mr. Cole and the other named inventors of the instant application discovered implementations of the claimed invention in an effort to improve over the teachings of such prior art teachings as TIVA (temperature-induced voltage alteration) and LIVA (light-induced voltage alteration); this background is discussed in the specification of the instant application, *e.g.,* at page 3, lines 10-11 (previous known methods of circuit analysis "are not effective in localizing resistive interconnections.") and at page 9, lines 7-9 (such failure modes can be inadequate for appropriately locating an effective portion of the die when the die includes a resistive circuit path because such a resistive path can generate a false failure mode.")

The subject matter of the '305 reference is directed to this background teaching (LIVA) over which the present invention improves. The '305 reference is directed to monitoring the voltage level at the power source of the die and, while holding the supply current at a constant level, determining if an irregularity in the general operation of the die would cause an alteration of this monitored voltage level. As discussed in the cited portion of the '305 reference, in the presence of a defective circuit, this LIVA approach for analyzing the die "will result in a large reduction in the power supply voltage." Column 14, lines 63-64. This LIVA approach does not, however, include identifying any specific circuit path within the die that electrically changes in response to heat or detecting that a particular circuit portion therein is resistive or is otherwise failing. The example implementations, as covered by the instant claims, are directed to addressing these shortcomings. As discussed above, the previous known methods of circuit analysis "are not effective in localizing resistive interconnections." Applicant's claimed invention includes limitations directed to identifying the specific circuit paths that electrically change in response to heat and detecting that a particular circuit portion therein is resistive. Because the '305 reference does not involve either of these claimed aspects, Applicant submits that the §102(b) rejection must be removed.

Applicant respectfully traverses the §103 rejections as there can be no expectation of success for the proposed modifications of the '305 reference. All of the §103 rejections rely on the '305 reference which is insufficient to teach all limitations of the claimed invention as discussed above. Further, as described in the specification of the instant application, the claimed invention is an improvement on the subject matter disclosed in the '305 reference such that the claimed invention could not be taught by the '305 reference. More particularly, many of the claims rejected do not appear to bear correlation to the cited teachings of prior art. For example, the '305 reference is directed to LIVA, rather than TIVA; with LIVA, the photon energy is used to produce a photo-generated current in the target circuit so as to permit monitoring the voltage level at the power source. However, claim 2 of the instant application includes the step of heating selected circuitry to cause a failure in a suspect signal site path. The Examiner's argument concerning the teaching in *Mathewes* erroneously assumes that the target circuitry of the '305 reference has a suspect resistive circuit and that both the suspect resistive circuit and the circuit path in which it resides have already been identified. This is not the case, however, since the '305 reference clearly teaches that the light is being produced not in connection with identifying any specific circuit paths that electrically change in response to heat or detecting that a particular circuit portion therein is resistive; but rather the '305 reference teaches that the light is being produced for monitoring the voltage level at the power source. Thus, the skilled artisan would not be led to combine the teaching in *Mathewes* with the teaching of the '305 reference as asserted in the Office Action. Moreover, because the teaching in *Mathewes* involves use of a BIT maintenance controller which is not present in the target dice of the '305 reference, combining the teaching in *Mathewes* with the teaching of the '305 reference would not result in the identification of any specific circuit paths that electrically change in response to heat or detecting that a particular circuit portion therein is resistive. Accordingly, no *prima facie* case of obviousness has been presented.

In view of the above, Applicant submits that each of the claims is in condition for allowance. Reconsideration and withdrawal of the rejections, along with a favorable response, are earnestly requested.

Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to contact the undersigned at 651/686-6633.

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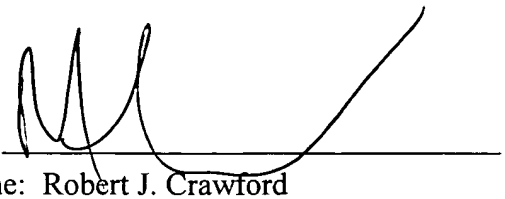
By: 
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Enclosed: Supplemental Declaration (8 pages)